

STUDIES IN AQUATIC INSECTS XVI: TWO NEW SPECIES OF THE MICROCADDISFLY GENUS *MEJICANOTRICHIA* (TRICHOPTERA: HYDROPTILIDAE) FROM MEXICO, WITH A KEY TO THE SPECIES IN THE GENUS¹

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ABSTRACT: The recently erected Mexican and Guatemalan microcaddisfly genus *Mejicanotrichia* contains five previously described species. In this paper, *M. harrisi* and *M. rara*, new species from Guerrero, Mexico, are described and their male genitalia illustrated. A key for adult males of all seven currently known species of *Mejicanotrichia* is included, with addition of new characters for the separation of *M. harrisi* and *M. rara*.

The genus *Mejicanotrichia* was erected by Harris and Holzenthal (1997) for species of the *Alisotrichia blantoni* species group (sensu Flint 1970) and for one species new to science.

With the exception of *Mejicanotrichia trifida* described from Guatemala, Dept. Izabal, the species described for the genus have been collected in Mexico: *M. estaquillo*, Nuevo León; *M. blantoni*, San Luis Potosí; *M. tamaza*, Oaxaca; *M. tridentata*, Chiapas; *M. rara*, new species, Guerrero; and *M. harrisi*, new species, from Guerrero, México.

Individuals of the species we describe here lack the forewing modifications of *Mejicanotrichia* males mentioned by Harris and Holzenthal. However, other characters in the specimens studied, such as the presence of three ocelli, unmodified antennae, 0-2-4 tibial spurs, and the median notch on the ninth sternum are considered by us as strong characters supporting the inclusion of these two new species within *Mejicanotrichia*.

Morphological terminology used in the description follows that of Marshall (1979). Types and paratypes are deposited in the Colección Nacional de Insectos del Instituto de Biología, Universidad Nacional Autónoma de México. (CNIN) and National Museum of Natural History (NMNH).

Mejicanotrichia rara, Bueno & Barba, NEW SPECIES

Figs. 1-4

Mejicanotrichia rara, new species, appears to be related to *M. trifida* because the phallus bears apically a pair of lobules and subapically a pair of lateral spines. However, *M. rara* can be distinguished by the presence of an elon-

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gate sternal process on abdominal segment VII, and by the wider notch on the ventral portion of segment IX.

ADULT: Length of forewings 1.3 mm. Color in alcohol fuscous. Abdominal segment VII with an elongate sternal process. Segment VIII subdivided, ventral portion in lateral view slightly ellipsoid with posterior border rounded, anterior border straight; in dorsal view rectangular with fringe of elongate setae; in ventral view with posterior fringe of elongate setae.

Male genitalia: Segment IX in lateral view dorsoventrally compressed, narrowing dorsally; posteroventrally with short rounded projection; elongate sclerotized process directed ventrally, narrowing distally and curved ventrad; in ventral view posterior border with wide mesal excision, lateral margins of excision rectangular, laterally with elongate processes from dorsal margin, processes with elongate tips bending mesad; in dorsal view emarginated posteriorly. Tenth tergum an ellipsoidal membranous lobe with thin sclerotized bands laterally. Inferior appendages and subgenital plate absent. Phallus in ventral view constricted subbasally; mesally with a pair of stout, short spines; anteriorly subdivided into two elongate processes, each one with a subapically internal long and thin spine-like sclerite; ejaculatory duct long and threadlike.

Female: Unknown

Type material: Holotype: ♂, MEXICO: Guerrero: Municipio de Taxco, Teusisapan, Río Temascalapa. 18° 25.083' N: 99° 41.490' W, 1056 m, 28-II-1995, R. Barba and A. Rojas (CNIN). Paratypes: Same location as holotype but, 18° 25.56N: 99° 42.5W, 930m, 12-X-1994, R. Barba and D. Ocaña, 1 ♂, (CNIN); Same location as holotype but 21-X-1995, R. Barba and D. Ocaña, 1 ♂, (CNIN).

Etymology: The species epithet, *rara*, is the Spanish for feminine of rare or uncommon.

Mejicanotrichia harrisi, Bueno & Barba, NEW SPECIES

Figs. 5-8

Mejicanotrichia harrisi, new species, is similar to *M. tamaza* (Flint) by the presence of a pair of elongate lateroventral processes of the phallus. However, this new species can be easily recognized by the presence of two short, hook-like sclerites, situated subapically in the phallus, visible in both ventral and dorsal views.

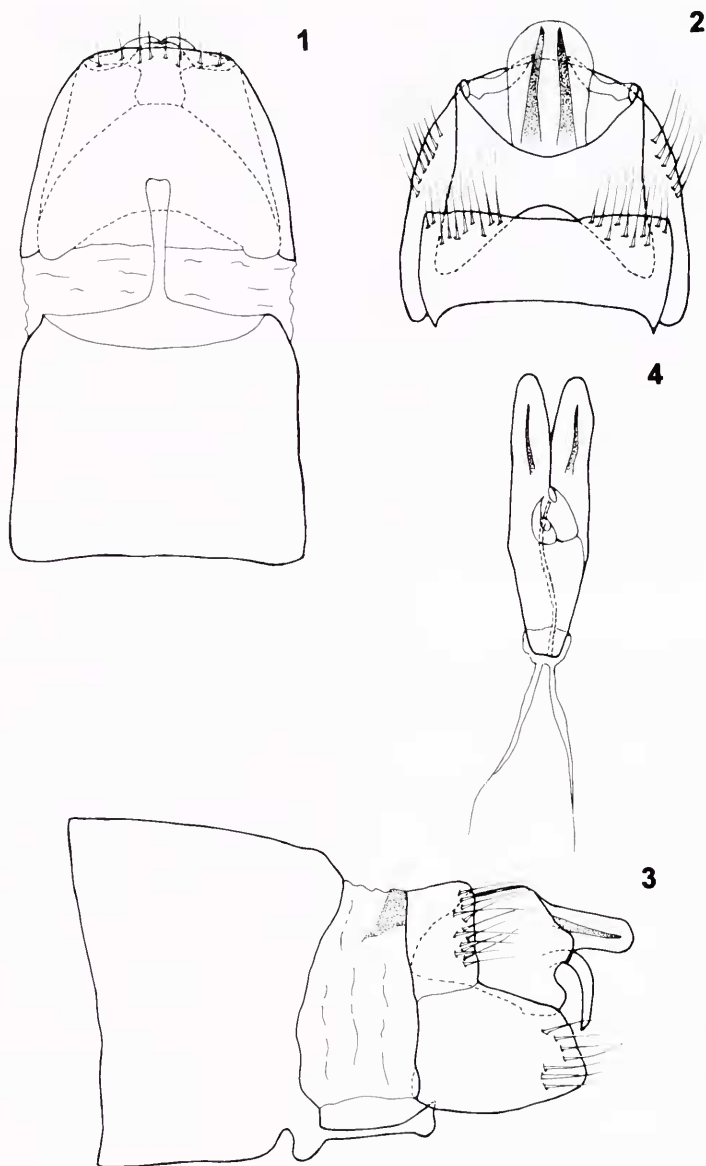
ADULT: Length of forewings 2 mm. Color in alcohol fuscous. Abdominal segment VII without sternal process. Segment VIII elongate posteroventrally, emarginated ventrally along posterior margin.

Male genitalia: Segment IX in lateral view, dorsoventrally compressed, narrowing dorsally, posteroventrally with triangular projection, elongate sclerotized process posteromesally, narrowing distally and curved ventrad; in ventral view with deep mesal excision on posterior border, lateral margins of excision rectangular; laterally with rounded plate bearing elongate processes from dorsal margin, processes with elongate tips bending mesad; in dorsal view deeply emarginated on posterior margin with fringe of elongate setae. Tergum X ellipsoidal membranous lobe. Inferior appendages and subgenital plate absent. Phallus in ventral view constricted subbasally; mesally with two pairs of short spines; apex with pair of elongate, sclerotized and straight lateral processes, with a membranous elongate, rectangular, mesal process, with truncate apex.

Female: Unknown

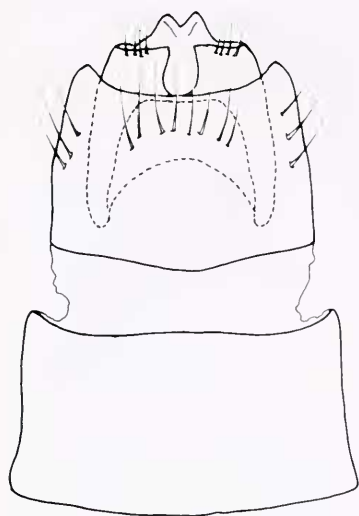
Type Material: Holotype. ♂: MEXICO: Guerrero: Municipio de Taxco, Teusisapan, Río Temascalapa, 18° 25.083' N: 99° 41.490' W 1056 m, 12-X-1994, R. Barba and D. Ocaña (CNIN). Paratypes.- Same location as holotype, but 12-X.-1994 1 ♂ (CNIN); 28-I-1995, R. Barba and R. Gaviño, 3 ♂ (CNIN); same but 28-II-1995 R. Barba and A. Rojas 5, ♂ (NMNH); same but 27-V-1995, R. Barba and D. Ocaña 7 ♂ (CNIN); same but 24-VI-1995, R. Barba 7 ♂ (CNIN).

Etymology: We dedicate this species to our colleague, Dr. Steve Harris, for his contributions to the knowledge of the Neotropical caddisfly fauna.

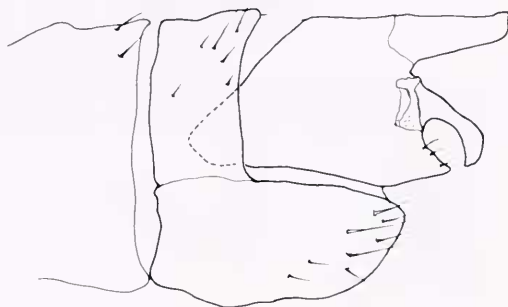


Figs.- 1-4. *Mejicanotrichia rara*, new species. 1-4. Male genitalia. 1. Ventral view. 2. Dorsal view. 3. Lateral view. 4. Phallus dorsal view.

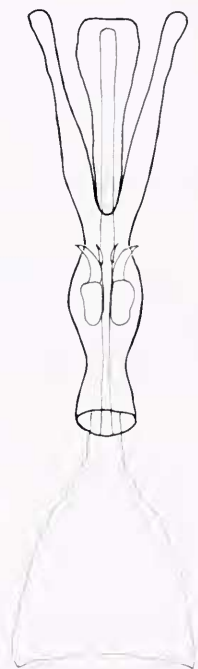
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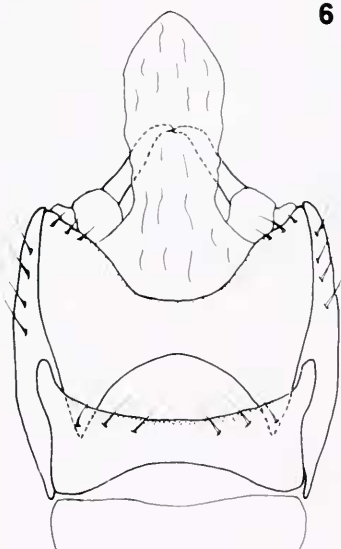
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Figs.- 5-8. *Mejicanotrichia harrisi*, new species. 5-8. Male genitalia. 5. Ventral view. 6. Dorsal view. 7. Lateral view. 8. Phallus dorsal view.

Key to adult males of *Mejicanotrichia*

1. Phallus with apical or subapical spines. 2
 Phallus without apical or subapical spines (Fig. 8) *M. harrisi* new species
2. - Phallus with three pairs of spines apically (Harris and Holzenthal 1997, figs. 10 D, E) ... 3
 Phallus with two pairs or less of apically or subapically spines (Harris and Holzenthal 1997, figs. 8. D, E) 4
3. Phallus apically with three pairs of elongate lateral spines and central spine (Harris and Holzenthal 1997, fig. 10 D, E) *M. estaquillosa*
 Phallus apically with three pair of short spines and a pair of short lateral spines subapically (Harris and Holzenthal 1997, fig. 3 D, E). *M. blantonii*
4. Phallus apically with two pairs of elongate spines 5
 Phallus apically without spines (Harris and Holzenthal 1997, figs. 6. D, E), (Fig. 8) 6
5. Phallus apically with a pair of elongate, weak spines laterally, pair of thin spines mesally and subapically with a pair of spicule bearing sclerites (Harris and Holzenthal 1997, figs. 5. D, E) *M. tamaza*;
 Phallus apically with two pair of elongate spines, without subapically pair of spicule bearing sclerites (Harris and Holzenthal 1997, figs. 8. D, E) *M. tridentata*
6. Phallus subapically with a pair of lateral spines, with ejaculatory duct emerging between spines (Harris and Holzenthal 1997, fig. 6. E) *M. trifida*
 Phallus subapically with a pair of thin, elongate spines laterally, without ejaculatory duct emerging between spines (Fig. 4) *M. rara*

DISCUSSION

The new species were collected at a permanent mountain stream, north of the basin of the large Balsas River, with vegetation typical of a deciduous tropical forest (Rzedowsky 1986). The climate for this area is hot and dry most of the year, with a rainy season from June throughout September.

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